PROJECT DESRCIPTION

GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 24 AND PLUMTREE ROAD IN HARFORD COUNTY. MD 24 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC ACTUATED MODE WITH THE MD 24 APPROACHES OPERATING CONCURRENTLY AND THE PLUMTREE ROAD APPROACHES RUNNING CONCURRENTLY.

EXCLUSIVE LEFT-TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MD 24 WILL BE PROVIDED.

SPECIAL NOTE

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410)787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MD SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

EQUIPMENT LISTS

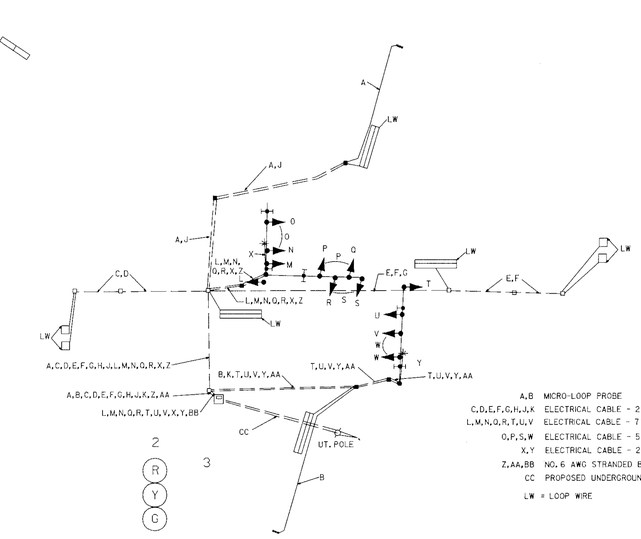
A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
9014	11 EA	(MAST ARM MT) 12" 1-WAY, 3-SECTION SIGNAL (4 EACH OF (RA.YA.GA) AND 7 EACH OF (R.Y.G) POLYCARBONATE
9036	1 EA	(SIDE OF POLE MT) 12" 1-WAY, 3-SECTION SIGNAL (RA.YA.GA)
9086	1 EA	CABINET W/ TELEMETRY (SYSTEM CAB), SIZE 6
9087	1 EA	CONTROLLER ASC IIW/ TELEMETRY
9089	121 SF	FLAT SHEET ALUM SIGN-YELLOW, ORANGE, & SILVER (SF)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

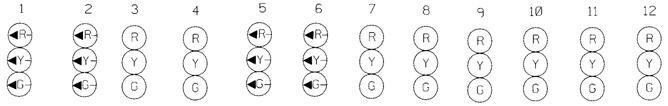
ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2001	1 CY	TEST PIT EXCAVATION
5004	210 LF	24 INCH WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE
5013	40 LF	REMOVE EXISTING PAVEMENT MARKINGS - ANY WIDTH
8001	8 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8011	12 EA	INSTALL SIGNAL HEAD (ANY TYPE)
8016	2 EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FT LEAD-IN
8020	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8021	565 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8022	100 LF	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED SLEEVE
8024	100 LF	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8026	150 LF	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8027	90 LF	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8028	310 LF	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - SLOTTED
8033	5 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	2 EA	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
8040	1650 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG)
8041	3100 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8043	440 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 3 CONDUCTOR (NO 14 AWG)
8044	90 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8045	1950 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8046	440 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO 12 AWG)
8049	350 LF	FURNISH AND INSTALL NO 6 AWG STRANDED BARE COPPER GROUND WIRE
8050	700 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG - THHN/THWN
8053	50 SF	INSTALL GROUND MOUNTED SIGN
8054	71 SF	INSTALL OVERHEAD SIGN
8056	2 EA	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8057	2 EA	FURNISH AND INSTALL LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
8058	2 EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCH BELOW GRADE
8059	1 EA	REMOVAL OF EXISTING CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE
8060	1 EA	DELIVERY OF REMOVED CONTROLLER, CABINET AND GALVANIZED SIGNAL STRUCTURE
8069	30 LF	FURNISH AND INSTALL 1 INCH ELECTRICAL CONDUIT - GALVANIZED RISER
8070	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIP (120/240V, 1 PHASE 3 WIRE SYST)
8084	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 70 FOOT MAST ARM
8086	1 EA	FURNISH AND INSTALL MAST ARM POLE AND TWIN (50 FT/70 FT) OR (70 FT/50 FT) MAST ARMS

WIRING DIAGRAM



A,B MICRO-LOOP PROBE
C,D,E,F,G,H,J,K ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
L,M,N,O,R,T,U,V ELECTRICAL CABLE - 7 CONDUCTOR
O,P,S,W ELECTRICAL CABLE - 5 CONDUCTOR
X,Y ELECTRICAL CABLE - 2 CONDUCTOR (NO.12 AWG)
Z,AA,BB NO.6 AWG STRANDED BARE COPPER GROUND WIRE
CC PROPOSED UNDERGROUND SERVICE FROM BG & E
LW = LOOP WIRE

PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	
Phase 1 & 5	◀G–	◀G–	R	R	◀G–	◀G–	R	R	R	R	R	R	
1 & 5 Change	THE CONTROLLER MAY SKIP TP PHASES 1 & 6 OR 2 & 5 OR 2 & 6												
Phase 1 & 6	◀R–	◀R–	R	R	◀G–	◀G–	G	G	R	R	R	R	
1 Change	◀R–	◀R–	R	R	◀Y–	◀Y–	G	G	R	R	R	R	
Phase 2 & 5	◀G–	◀G–	G	G	◀R–	◀R–	R	R	R	R	R	R	
5 Change	◀Y–	◀Y–	G	G	◀R–	◀R–	R	R	R	R	R	R	
Phase 2 & 6	R	R	G	G	R	R	G	G	R	R	R	R	
2 & 6 Change	R	R	Y	Y	R	R	Y	Y	R	R	R	R	
Phase 4 & 8	R	R	R	R	R	R	R	R	G	G	G	G	
4 & 8 Change	R	R	R	R	R	R	R	R	Y	Y	Y	Y	
Flashing Operation	F/R	F/R	F/Y	F/Y	F/R	F/R	F/Y	F/Y	F/R	F/R	F/R	F/R	

REVISIONS	APPROVALS
	ASST. TRAFFIC ENGINEERING DESIGN DIVISION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
MD 24 AND PLUMTREE ROAD

DRAWN BY: KIM WINKLER	F.A.P. NO. AC-STPG-0005(589)E	TS NO. TS-3797	SHEET NO.
CHECKED BY:	S.H.A. NO. AW280A51/B5P		
SCALE: 1"=20'	COUNTY: HARFORD	T.I.M.S. NO. C 820	2 OF 2
DATE: JUNE 1, 1998	LOG MILE: 12024011.87		